RX-V1300 Digital Home Theater Receiver

Yamaha Targets Mid to High-End Customers with the New RX-V1300 Home Theater Receiver Featuring Superb Sound Quality and Extensive Facilities for Home Theater Entertainment.

Yamaha Corporation, one of the world's leading manufacturers of audio and home theater systems, announces the latest addition to its line of high quality home theater receivers.

The RX-V1300 is designed for 6.1-channel home theater systems and features Yamaha's Digital ToP-ART design concept, 192kHz/24-bit DACs for all channels, a 32-bit CINEMA DSP LSI, full surround format compatibility, 25 surround programs with Yamaha's exclusive Quad-Field CINEMA DSP, SILENT CINEMA, a wide-range power amplifier and extensive inputs and outputs.

RX-V1300 Main Features:

- High power 6-channel discrete amplifier configuration (100W x 6, RMS)
- Digital ToP-ART (Total Purity Audio Reproduction Technology)
- Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
- Compatibility with latest movie sound formats including Dolby Digital EX, Dolby Pro Logic II, DTS-ES Discrete 6.1, and DTS Neo:6.
- 25 surround programs (45 variations) including Quad-Field CINEMA DSP programs
- Accurate touch digitally regulated volume control governs all channels (Yamaha YAC-520 LSI)
- SILENT CINEMA for headphone enjoyment
- Finest parts used throughout for high sound quality
- Extensive inputs and outputs

Digital Home Theater Receiver

RX-V1300

Versatile, high performance receiver designed to serve as the core component of any high quality home theater system. Major features include 6-channel discrete amplification (100W x 6, RMS), Yamaha's Digital ToP-ART design concept, Quad-Field CINEMA DSP, 25 surround programs, SILENT CINEMA, and learning-capable/present remote control. Compatible with the newest 6.1-channel movie sound formats including Dolby Digital EX, DTS-ES Matrix 6.1, DTS-ES Discrete 6.1, Dolby Pro Logic II and DTS Neo:6.

● **Black finish available in some areas**

Everything You Want in a Home Theater Receiver, Plus Numerous Yamaha Exclusive Features for Greater Enjoyment.

Advanced Technology and an Extensive Range of Functions Give You Complete Satisfaction.

- High Power 6-Channel Discrete Amplifier Configuration (100W x 6, RMS)
- Digital ToP-ART (Total Purity Audio Reproduction Technology)
- Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
- Compatibility with latest movie sound formats including Dolby Digital EX, Dolby Pro Logic II, DTS-ES Discrete 6.1, and DTS Neo:6
- 192kHz/24-bit System DAC
- 25 surround programs including Quad-Field CINEMA DSP programs
- Accurate touch digitally regulated volume control governs all channels (Yamaha YAC-520 LSI)

Digital ToP-ART

DIGITAL ToP·ART

Digital ToP-ART (Total Purity Audio Reproduction Technology) is the name Yamaha has given to a design philosophy whose goal is to maximize digital quality while minimizing analog circuitry. The culmination of the best digital engineering and design possible today, it brings together several key elements to create the best-sounding, easiest-to-use A/V components available

Advanced Decoding Circuitry Including Yamaha's Exclusive YSS-938 32-Bit Floating Point Quantization LSI

The decoding circuitry performs Dolby Pro Logic II, Dolby Digital, Dolby Digital EX, DTS Digital Surround, DTS-ES (DTS-ES Matrix 6.1 and DTS-ES Discrete 6.1), and DTS Neo:6 decoding with extreme accuracy, as well as all digital sound field processing. It also outperforms other systems in the precise synchronization of images and sound. Its low 3V power consumption minimizes digital noise.

192kHz/24-Bit Digital-to-Analog Converter System

The RX-V1300's vitally important digital-to-analog converters use an extremely high performance 192kHz/24-bit type. They perform accurate sound field reproduction for high quality multi-channel sources, and for two-channel stereo, provide outstanding separation and precise musical delineation. They deliver superior low level linearity with excellent full-scale performance under varying operation conditions.

RX-V1300

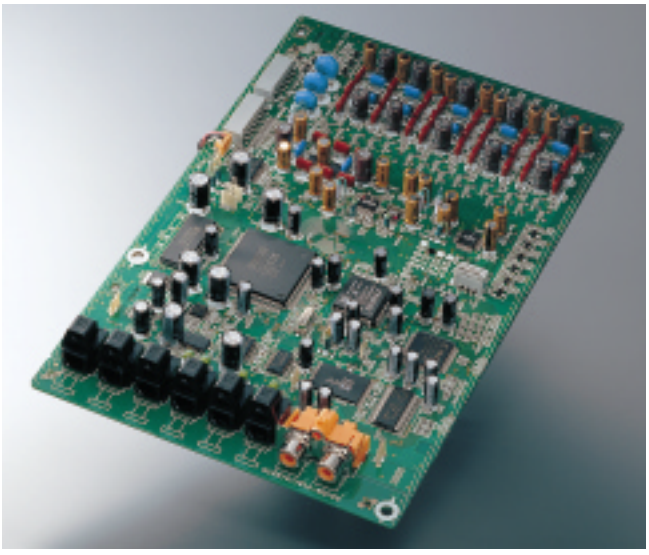
Digital Home Theater Receiver

● **Black finish available in some areas**

CINEMA DSP DIGITAL · silent CINEMA · DIGITAL ToP·ART · DOLBY DIGITAL·EX PRO LOGIC II · EXTENDED dts ES SURROUND · 6CH EXT. INPUT

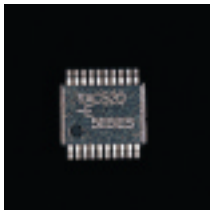
Accurate Touch Volume Control

No one expects more from a volume control than up and down — except Yamaha. We decided that controlling the volume could be made both easier and more accurate, and the result is the Accurate Touch Volume Control. It lets you make delicate adjustments within a narrow range, yet enables you to move to very high or low levels more quickly. Its extreme accuracy is due to a high-signal-resolution analog design in conjunction with an ultra-precise digital control circuit (Yamaha original YAC-520 LSI). The wide control range extends from 0dB to –99dB, with narrow 0.5dB steps throughout the entire range for delicate control, even at low volumes.



The DSP processing and sound format decoding system in on a single board, which is shielded to prevent interference.

Yamaha's Exclusive YSS-938 32-Bit Floating Point Quantization LSI



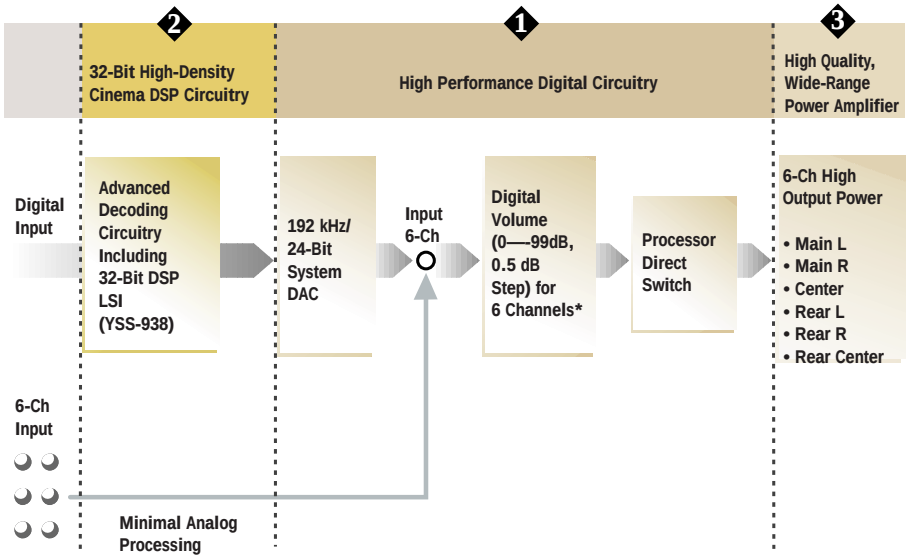
Digitally Regulated Volume Control Device (Yamaha Original YAC-520 LSI)

Processor Direct Switching

The RX-V1300 has a Processor Direct Switch that provides a direct signal connection between the processor board and the power amplifier section. This shortens the signal path, feeding the pure, robust signal directly to the outputs for cleaner, more efficient operation and higher quality sound.

DIGITAL ToP·ART
Total Purity Audio Reproduction Technology

From digital input, through digital processing, to amplification, maximum signal quality is maintained every step of the way.



* In addition to the six channels (Main L/R, Center, Rear L/R, Rear Center) there is a subwoofer output (hence 6.1-channel format compatibility) and two front effect channels (a total of 9 DACs). The front effect channel signals, unique to Yamaha CINEMA DSP, are mixed with the main channel signals to achieve more precise separation of dialogue, music and effects on the front sound stage and a superior sense of presence as compared to other systems.

Behind the Outstanding High Sound Quality

The RX-V1300 is designed to deliver the full impact and dynamism of movies by supplying generous amounts of power (including bass power!). That's why despite all the digital processing magic, it is first and foremost a powerful receiver. By drawing on our long years of amplifier expertise (we've created some of the world's legendary power amps and preamps) and refusing to make any compromises on quality, we've endowed the RX-V1300 with awesome capabilities. It incorporates a powerful 6-channel amplifier with high dynamic power and sophisticated circuitry like linear damping.

Total Low-Impedance Design

All current signal paths, from the power supply to the power amplifier to the speaker drive circuits, utilize a low-impedance design. This improves the separation characteristics among multi-channels and allows the use of a wider variety of low-impedance speakers.

6-Channel High Power, Discrete Amplifier Configuration

The RX-V1300 will deliver as much as 100W (RMS) of power to each of six channels (two main, two rear, one center and one rear center). This is more than enough to fill even the largest rooms with vibrant music and Richter-scale sound effects.

High Dynamic Power Capability

The RX-V1300 is capable of delivering large amounts of reserve power for accurate reproduction of the high energy peaks that are especially prevalent in digital audio sources. This emphasizes the music's dynamic qualities and provides a sharper sound image.

Linear Damping (Main L/R Channels)

Level variations due to high amp impedance tend to reduce an amplifier's damping factor, and frequency variations cause it to fluctuate. This circuit cancels the effect of these variations, maintaining a high, stable damping factor, for superior articulation of all sounds and better frequency response.

Anti-Resonance ToP-ART Base

Supporting the heavy heat sinks, transformer, and circuit board is Yamaha's ToP-ART base, which has exceptional anti-resonance and damping characteristics. Beneath this base is the bottom of power amplifier, part of the heavy chassis which is also designed for maximum vibration damping.

Anti-Resonance Alminum-Extruded Heat Sinks with High Efficient Cooling System

The large, anti-resonance, aluminum-extruded heat sink is located on the base frame with the power amplifier circuit boards to prevent interference with the preamplifier and digital processing sections. The power block is equipped with a fan, but it is only used for extreme heat build-up and is not activated during normal operation, preventing the occurrence of even the slightest unwanted noise.

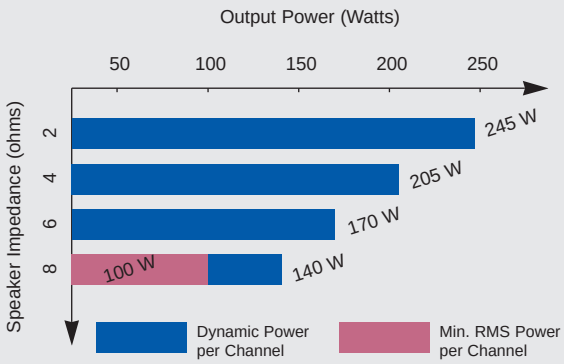
Wide-Range Frequency Response for DVD-Audio and SACD

With an extremely wide frequency range of 10 to 100,000Hz, this receiver is capable of delivering the full potential of the new digital audio sources DVD-Audio and SACD.

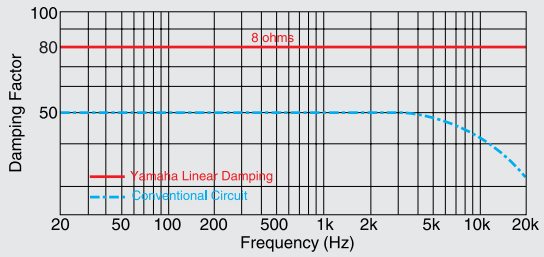
Optimum Space Utilization

The use of highly integrated LSIs allows an interior design that maximizes power and sound quality by positioning all the digital processors and related circuitry in one small area. This leaves most of the space open for the power amplifier components: transformers, capacitors, heat sink and so on. This means that these parts can be much larger than usual for greater power, that they can be separated for minimum chance of interference, and that circuits can be arranged in straight lines for maximum signal purity.

Output Power vs. Speaker Impedance



Damping Factor Characteristics



Linear Damping

Yamaha's Linear Damping maintains a high, stable damping factor even at frequencies from 10 to 20 kHz, where it generally tends to fall off. The result is superior articulation of all sounds.

Finest Parts Used Throughout

In order to realize the goals of massive power and superlative sound quality, Yamaha technicians completely re-evaluated all the parts used in previous receivers. As a result, many were replaced with more expensive or custom-designed units.

● Extra-Large Custom-Made Block Electrolytic Capacitors

Developed specifically for the RX-V1300, the 12,000µF block electrolytic capacitors use low-magnification foil and are exceptionally high quality.

● Twin Direct Signal Path Speaker Relays with Gold-Plated Crossover Connection and Shielding

Speaker switching is accomplished by relays right in front of the speaker terminals, rather than at the switch position. This results in a shorter signal path and minimum output impedance.

● High Performance Myca Capacitors and Film Capacitors

At this level of sound quality, even these small parts make a difference. The high precision FE mica and metallic mylar film capacitors use polypropylene material and are the highest performance types on the market.

● Extra-Large Low-Impedance Transformer

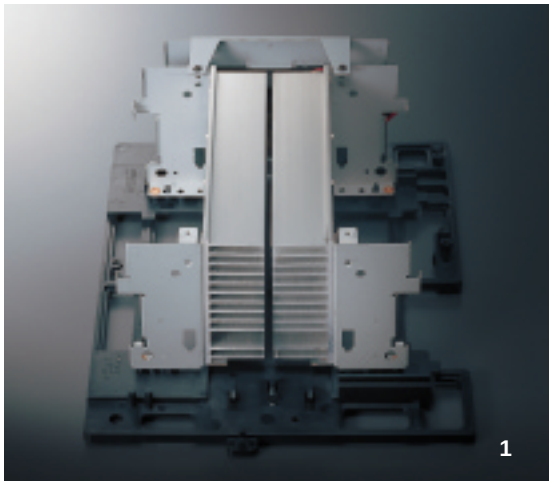
The large 4.7kg low-impedance transformer is an important factor in the RX-V1300's extremely stable power supply.

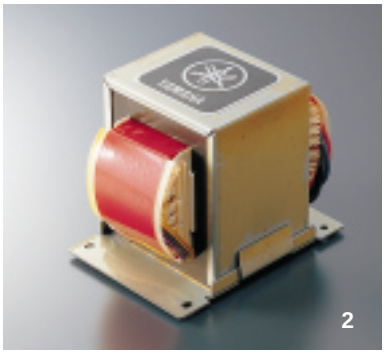
● CINEMA DSP Processing Board for Optimum Performance

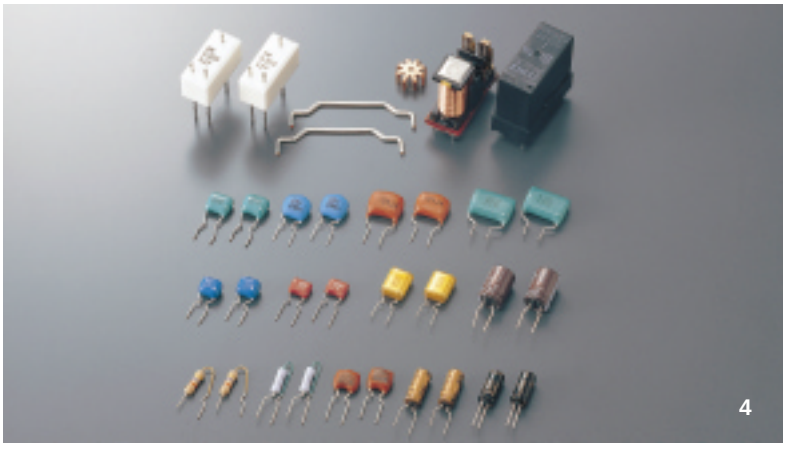
The printed circuit board holds both the DSP processing and sound format decoding circuitry, thus saving space, and is shielded to prevent interference.

● Thick PC Board Wiring with 1.6mm ϕ Copper Jumper Cables

The audio signal is routed within the amplifier through exceptionally thick, top quality wire, ensuring that signal purity is maintained.







(1) Anti-Resonance Alminum-Extruded Heat Sinks with High Efficient Cooling System
(2) Extra-Large (4.7kg), Low-Impedance Transformer
(3) Extra-Large Custom-Made Block Electrolytic Capacitors
(4) FE Mica Capacitors, Polypropylene Film Capacitors, Polyethylene Telephthalate Capacitors, High Quality Resistors and Twin Direct Signal Path Speaker Relays with Gold-Plated Crossover Connection and Shielding

Yamaha CINEMA DSP for Home Theater: Dramatically Different Than Other Systems.

CINEMA DSP Puts You Inside the Scene

With Dolby Digital and DTS Digital Surround, CINEMA DSP projects three sound fields into the home theater: a Presence sound field in the front and two Surround sound fields in the left rear and right rear. The Presence field supplies the dialogue, music and effects, while the Surround fields are independent stereo sound fields that create a large-scale surround environment, resulting in a powerfully realistic three-dimensional soundscape. And our newest Quad-Field system adds a rear center field for 6.1-Channel Digital Surround formats.

The success of CINEMA DSP is due as much to Yamaha's outstanding sound field software as to the hardware (microprocessors, etc.). The overwhelming sense of realism is due to the fact that data from real sound fields is used (in this case, the actual dubbing theaters that movie sound technicians use).

This is why even though other systems may sound "good," you still have the sense of watching/listening to the scene, whereas with Tri-Field/Quad-Field CINEMA DSP, you feel as though you are actually INSIDE the scene. This results in sound with highly accurate localization, smooth movement, exceptional clarity and richness, and startlingly realistic presence.

Yamaha DSP: Digital Sound Field Processing

Digital Sound Field Processing is a technology developed by Yamaha in 1986 to measure the sound fields, or acoustic characteristics, of concert halls, jazz clubs and other performance spaces. Yamaha engineers invented a technique called Single Point Quad Miking that allowed them to make precise measurements of these spaces, and they went to many famous venues around the world, gathering data which they stored in custom-designed computer chips. Utilizing this data in even more powerful processing chips allows Yamaha DSP components, with four or more speakers, to recreate the original sound fields right in ordinary listening rooms.

Other manufacturers try to imitate these results with what they call Digital Signal Processing, but this is only their audio engineers' best guesses as to what the acoustic properties of concert halls or jazz clubs might be.

Digital Sound Field Processing was one

RX-V1300 Surround Programs: 25 Surround Programs (45 Variations)

HiFi DSP Programs		Variations
CONCERT HALL	● Concert Hall	1
CHURCH	● Church	1
JAZZ CLUB	● Jazz Club	1
ROCK CONCERT	● Rock Concert	1
ENTERTAINMENT	● Disco	1
	● 6 Ch Stereo	1
Program Subtotal	**6**	**6**
CINEMA DSP Programs		**Variations**
ENTERTAINMENT	● Game	1
MUSIC VIDEO	● Pop/Rock	1
TV THEATER 1	● Mono Movie	1
	● Variety/Sports	1
MOVIE THEATER 1	● Spectacle	5
	● Sci-Fi	5
MOVIE THEATER 2	● Adventure	5
	● General	5
ENHANCED	● Enhanced	5
Program Subtotal	**9**	**29**

Surround Formats		Variations
	● Dolby Digital	1
	● Dolby Digital EX	1
	● DTS Digital Surround	1
	● DTS-ES Matrix 6.1	1
	● DTS-ES Discrete 6.1	1
	● Dolby Pro-Logic	1
	● Dolby Pro Logic II Music	1
	● Dolby Pro Logic II Movie	1
	● DTS Neo:6 Music	1
	● DTS Neo:6 Cinema	1
Program Subtotal	**10**	**10**
Program Total	**25**	**45**

Remarks
- ●: HiFi DSP Programs
- ●: A/V Programs
- ●: CINEMA DSP
- ●: Tri-Field CINEMA DSP Capable
- ●: Quad-Field CINEMA DSP Capable

Auto Priority Input Terminal Selection and Auto Decoder Selection

Digital input terminals are provided to handle any kind of digital input. Functions are programed to select priority in order of coaxial digital, optical digital and analog when different digital formats are input from the same source. The sound decoder is also automatically selected and processed according to the combination of the format of input signals and the selected sound field programs, while DSP sound field processing is optimized at the same time.

Brief Guide to Movie Sound Formats

● **Dolby Pro-Logic**
Dolby Lab's basic 4-channel format, widely used in ordinary theaters and for home videos.

● **Dolby Pro Logic II**
Improved version of Dolby Pro-Logic for music and movies. With a more intelligent matrix decoder, it is suitable for both stereo and surround-encoded sources. It offers "bass management" as well as the option of incorporating "width," "dimension" and "panorama" controls.

● **Dolby Digital**
The most popular 5.1-channel home theater sound system. An improvement over Dolby Pro-Logic in that it offers: 1) Full frequency response in all channels (3Hz — 20kHz), 2) discrete surround channels, and 3) a separate track for bass only, called the Low Frequency Effects channel.

● **Dolby Digital EX**
Dolby's latest surround format, this is Dolby Digital with an added center rear channel. The rear center channel is actually matrixed into the two rear channels, and is extracted upon playback. (Formerly called Dolby Digital Surround EX, or Dolby Digital Matrix 6.1.)

● **DTS Digital Surround**
The basic DTS 5.1 channel sound format. Uses a higher data rate than Dolby Digital.

● **DTS-ES Matrix 6.1**
Very similar to Dolby Digital EX. Uses a different rear center channel decoding method.

● **DTS-ES Discrete 6.1**
DTS-ES uses its large bandwidth to provide a fully discrete rear center channel, as opposed to a matrixed one.

● **DTS Neo:6**
Provides 5.1 or 6.1 channels of matrix decoding from stereo matrix material. Also decodes Extended Surround matrix soundtracks and has a Music mode to expand stereo non-matrix recordings to 5.1 or 6.1 channels.

important step in Yamaha's quest to bring listeners "Natural Sound." They could hear how their favorite singer or group would actually sound in New York's Bottom Line, for example, or even in a cathedral!

Quad-Field and Tri-Field CINEMA DSP

Tri-Field CINEMA DSP projects three sound fields into the home theater: a Presence sound field in the front and two Surround sound fields in the left rear and right rear, resulting in a powerfully realistic three-dimensional soundscape. And now Yamaha also offers Quad-Field CINEMA DSP. It adds an additional rear center sound field to the Tri-Field system, in order to enjoy the new 6.1-channel formats, Dolby Digital EX and DTS-ES.

SILENT CINEMA and Virtual CINEMA DSP

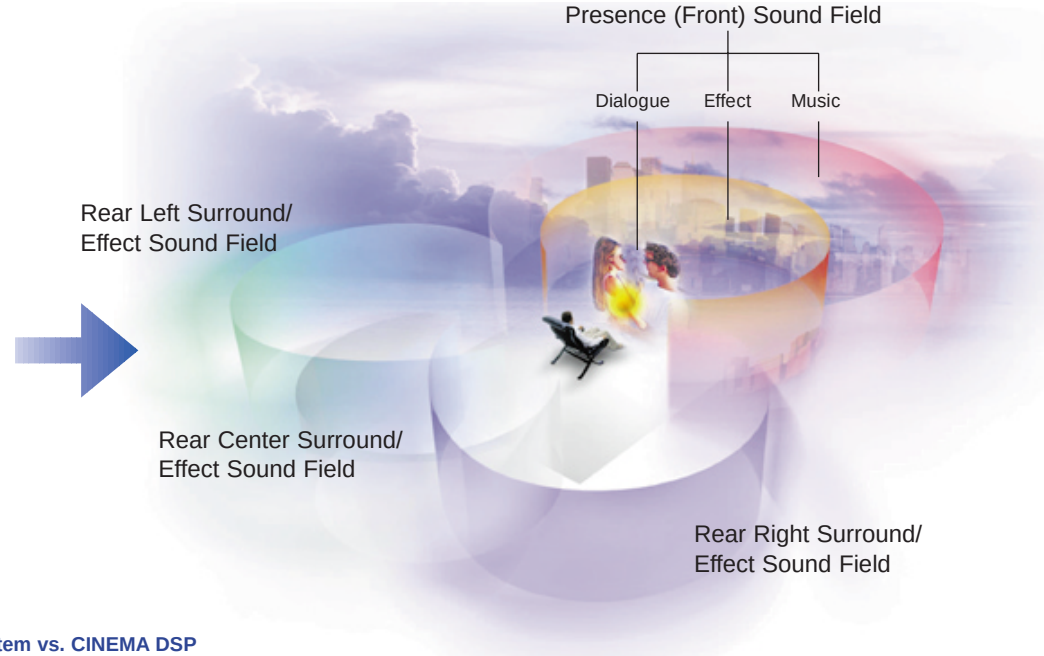
The SILENT CINEMA mode gives you private listening enjoyment of multi-channel music or movie sound, including Dolby Digital and DTS surround, through ordinary headphones. It's automatically selected when the headphones are plugged in. Virtual CINEMA DSP lets you enjoy the effects of CINEMA DSP surround sound without using rear speakers (handy for use in custom installations where some rooms don't have rear speakers). It can be used with the main/center/front effect speakers or even with just the two main left and right speakers.

SILENT CINEMA Sound Field Imaging

Virtual CINEMA DSP Sound Field Imaging

Quad-Field CINEMA DSP

Conventional 6.1-Channel Systems



Conventional 5.1-Channel/6.1-Channel System vs. CINEMA DSP

Conventional 5.1-channel/6.1-channel audio reproduction systems base their sound on Dolby Digital and DTS decoding, using matrix and steering technologies to create surround sound effects. Yamaha CINEMA DSP is much more advanced, actually creating richly realized independent sound fields that merge to envelop you in an unmatched surround sound experience. With dialogue, music and effects from the presence (front) and rear sound fields (plus rear center with 6.1-channel Quad-Field CINEMA DSP), it will seem as if the walls of your room have disappeared and you are in the middle of your own immense theater!

All the A/V Connections Needed for the Present and Into the Future! Plus a Host of Convenient Features.

Extensive Inputs and Outputs

In addition to the wide range of inputs and outputs provided on previous Yamaha receivers, the RX-V1300 also includes a Video Conversion connection (S-Video to Composite, Monitor Out).

Total Convenience

A comprehensive On-Screen Display with a convenient Set Menu allows selection and adjustment of a wide variety of functions. It even includes a speaker display that makes it easier to balance speaker output in the Speaker Test Mode. DSP programs can be selected with the remote control so the listening position. A rotary encoder Input Selector makes source selection quick and easy.

Convenient “Set Menu” with Parameter Control Functions

The following audio parameters can be adjusted from the menus:

- Speaker Set Functions (Center, Main, Rear, Rear Center, LFE and Main Level)
- Low Frequency Test
- L/R Balance
- Headphone Tone Control
- Center Graphic Equalizer
- Input Rename
- I/O Assign
- Input Mode
- Parameter Initialize
- LFE Level
- Dynamic Range
- Speaker Delay Time (Center and Rear Center)
- Display Set
- Memory Guard
- 6-Channel Input (Center and LFE channels output tmixed down to Main for music sources)

HDTV Compatible Component Video Out

The frequency response of the Component Video Monitor Out signal is DC—60MHz, making it compatible with HDTV monitors.

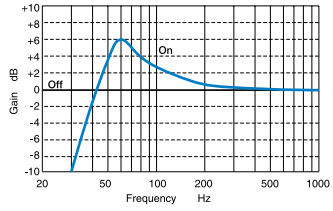
Fixed and Assignable Terminals

Yamaha offers terminals that can be either independently assigned to sources or defaulted to fixed settings.

Bass Extension

Turn the bass extension switch on to

Bass Extension Characteristics



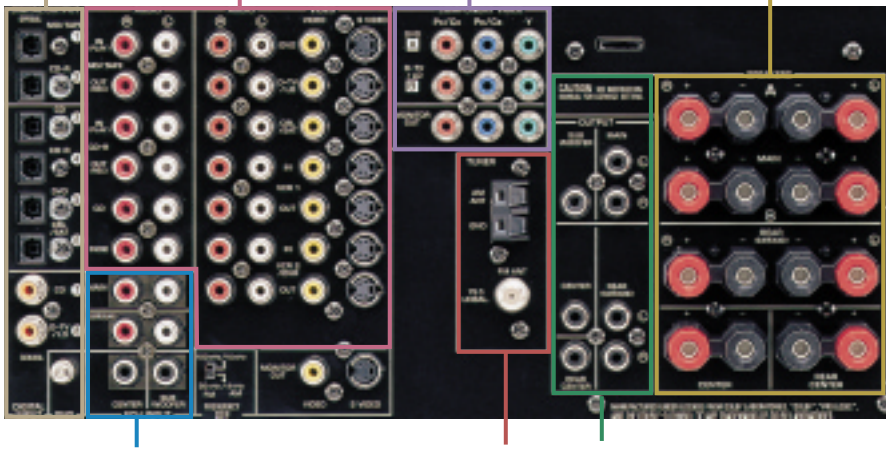
RX-V1300 Extensive Connections

5 Optical and 2 Coaxial Digital Inputs, and 2 Optical Digital Outputs (fixed and assignable)

6 A/V (with S-Video) and Audio Inputs, and 2 A/V (with S-Video) and 2 Audio Outputs

2 Component Video Inputs (fixed and assignable) and 1 HDTV compatible Component Video Output

2-Way Binding-Post Speaker Terminals (Banana-Plug Compatible)



6-Channel External Decoder Input for Enjoying DVD-Audio/Video or SACD

40-Station Preset Tuning

Main L/R, Center, Rear L/R and Rear Center Preout, and Subwoofer Output Terminals

RX-V1300 Inputs and Outputs

	Analog		Digital				Video					
			Coaxial		Optical		Composite		S Video		Compo. V.*	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PHONO	■		■		■							
CD	■		■		■	■						
CD-R	■	■	■		■	■						
MD/TAPE	■	■	■		■	■						
DVD	■		■		■	■	■		■		■	
D-TV/LD	■		■		■	■	■		■		■	
CBL/SAT	■		■		■	■	■		■		■	
VCR 1	■	■	■		■	■	■	■	■	■	■	
VCR 2/DVR	■	■	■		■	■	■	■	■	■	■	
VIDEO AUX**	■				■		■		■		■	
MONITOR OUT								■		■		■

* Comp. V: Component Video

** Video Aux Terminals are on Front Panel.

■: Fixed Terminals

■: Fixed and Assignable Terminals

■: Assinable Terminals

Oil-Damped Hidden Control Panel
Front Panel Aux Input Terminals with Optical Digital and S-Video Terminals: Auxiliary terminals with optical digital input make it convenient to connect a digital game machine so you can enjoy DVD games and movies. And Composite terminals are gold-plated for high quality sound reproduction.

provide +6dB boost to the main speakers' low end centered at 60Hz. Frequencies under 50Hz will be cut by 12dB/oct. to prevent overdrive.

Learning-Capable and Preset Remote Control Unit

The remote control can "learn" the functions of other components, so you can use it as a single remote for the entire system. It can be preset with control codes for TV, DVD, VCR, CDR, and other components. It also provides control of subwoofer level.

Tuner Section Features High Quality, Easy Operation

In addition to utilizing a Direct PLL IF Count Synthesizer Tuning system, the RX-V1300 also makes station selection easy. Users can preset as many as 40 stations for instant one-touch tuning, and with each one the tuning mode (auto or mono) is also memorized. Auto FM Station Memory will automatically preset the 40 strongest stations on the dial. The Preset Editing function can then be used to rearrange them into groups.

RX-V1300 Main Specifications

AUDIO SECTION		
Minimum RMS Output Power (8 ohms, 20–20,000 Hz, 0.04% THD)		
Main Channels		100 W + 100 W
Center Channel		100 W
Rear Channels		100 W + 100 W
Rear Center Channel		100 W
Max Power		
Main Channels		150 W + 150 W
Center Channel		150 W
Rear Channels		150 W + 150 W
Rear Center Channel		150 W
High Dynamic Power, Low-Impedance Drive Capability		Yes
Dynamic Power/Channel	8 ohms	140 W
	6 ohms	170 W
	4 ohms	205 W
	2 ohms	245 W
Linear Damping		Yes
Damping Factor (8 ohms, 20–20,000 Hz)		80 (speaker A)
Input Sensitivity/Impedance	Phono (MM)	2.5 mV/47 k-ohms
	CD	150 mV/47 k-ohms
Frequency Response		10–100,000 Hz +0, -3 dB
Total Harmonic Distortion (20–20,000 Hz)		
CD (Main Sp Out)		0.04%
Signa-to-Noise Ratio (CD, 250 mV)		100 dB
Tone Control Characteristics		
Bass	Boost/Cut	+10 dB 50 Hz
	Turnover Frequency	350 Hz
Treble	Boost/Cut	+10 dB 20 kHz
	Turnover Frequency	3.5 kHz
Bass Extension Characteristics	(60 Hz)	6 dB

VIDEO SECTION		
Video Signal Level		1 Vp-p/75 ohms
S-Video Signal Level	Y	1 Vp-p/75 ohms
	C	0.286 Vp-p/75 ohms
Component Video Signal Level	Y	1 Vp-p/75 ohms
	Pb/Cb, Pr/Cr	0.7 Vp-p/75 ohms
Signal-to-Noise Ratio		50 dB
Monitor Out Frequency Response		
Composite/S-Video Signal		5 Hz–10MHz -3 dB
Component Video Signal		DC-60MHz -3 dB
TUNER SECTION		
FM 50dB Quieting Sensitivity (1 kHz, 100% Modulation)		
	Mono	2 µV (17.3 dBf)
	Stereo	25 µV (39.2 dBf)
FM Selectivity	400 kHz	70 dB
FM Signal-to-Noise Ratio	Mono/Stereo	76 dB/70 dB
FM Frequency Response	20–15,000 hz	+0.5/–2 dB
GENERAL		
Dimensions	(W x H x D)	435 x 171 x 434 mm
Weight		15 kg

RX-V1300 Notable Features

DIGITAL
ToP·ART

1 High Performance Digital Circuitry
- 192 kHz/24-Bit System DAC
- Accurate Touch Digitally Regulated Volume Control Governs All Channels (Yamaha YAC-520 LSI)
- Processor Direct Switch
- High Sound Quality Multi-Function Processing Board, with Fully Shielded Cabinet for Reduced Digital Interference

2 High Density CINEMA DSP Circuitry
- Powerful Original 32-Bit Floating-Point Quantization System LSI (YSS-938) for and CINEMA DSP Processing
- Compatibility with Latest Movie Sound Formats including Dolby Digital EX, Dolby Pro Logic II, DTS-ES Discrete 6.1, and DTS Neo:6
- 25 Surround Programs (45 Variations) including New Music Video Program
- Quad-Field CINEMA DSP for 6.1-Channel Digital Surround
- SILENT CINEMA for Headphone Enjoyment
- Virtual CINEMA DSP for Versatile Surround Enjoyment

3 High Quality Power Amplifier Section
- 6-Channel High Power Discrete Amplifier Configuration (100W x 6, RMS)
- Total Low-Impedance Design
- High Dynamic Power, Low Impedance Drive Capability
- Linear Damping Circuit Prevents Unwanted Speaker Cone Movement
- Wide-Range Frequency Response (10–100,000 Hz +0/-3 dB) for DVD-Audio/SACD Compatibility
- Finest Parts Used Throughout
  - – Extra-Large (4.7kg), Low-Impedance Transformers
  - – Extra-Large Custom Made Block Electrolytic Capacitors
  - – Anti-Resonance, Aluminum-Extruded Heat Sink with High Efficient Cooling System
  - – Twin Direct Signal Path Speaker Relays with Gold-Plated Crossover Connection and Shielding for Stable Signal Path and Speaker Protection
  - – ToP-ART Base for reduced external resonance
  - – CINEMA DSP Processing Board for optimum performance with multi-channel audio sources, and fully shielded cabinet to prevent interference
  - – High Performance Myca Capacitors and Film Capacitors
  - – Thick PC Board Wiring with 1.6mmϕ Copper Jumper Cables
  - – Extruded Aluminum Volume Knob

Versatile, Extensive Connections
- 5 Optical and 2 Coaxial Digital Input Terminals (fixed and assignable, Video Aux: fixed)
- 2 Optical Output Terminals (fixed and assignable)
- 2 Component Video Input Terminals (fixed and assignable) and 1 Monitor Output Terminal with HDTV Compatibility
- 6 A/V (with S-Video) and 4 Audio Input Terminals
- 2 A/V and 2 Audio Output Terminals
- Front Panel Video Aux Input Terminals with Optical Digital and S-Video Terminals
- Gold-Plated Front Panel Composite Input Terminals
- 6-Channel External Decoder Input Terminals for Future Sound Formats
- Preout Terminals for Main, Center, Rear and Rear Center Channels
- Subwoofer Output Terminal
- Video Conversion (S-Video to Composite, Monitor Out)
- 2-Way Binding-Post Speaker Terminals (banana-plug compatible, all terminals)

Convenient Operating Features
- Auto Priority Input Selection and Auto Decoder Selection
- Rotary Encode Input Selector
- Convenient “Set Menu” with Parameter Control Functions
  - - Speaker Set Functions (Center, Main, Rear, Rear Center, LFE and Main Level)
  - - Low Frequency Test
  - - L/R Balance
  - - Headphone Tone Control
  - - Center Graphic Equalizer
  - - Input Rename
  - - I/O Assign
  - - Input Mode
  - - Parameter Initialize
  - - LFE Level
  - - Dynamic Range
  - - Speaker Delay Time (Center and Rear Center)
  - - Display Set
  - - Memory Guard
  - - 6-Channel Input (Center and LFE channels output mixed down to Main for music sources)
- On-Screen Display
- Bass Extension
- Speaker A/B Selector
- Sleep Timer
- Learning-Capable and Preset Remote Control Unit with LCD Display
  - - Learning Capability
  - - Preset Remote Capability with Control Code for TV, DVD, VCR, CDR, etc.
  - - Subwoofer Level Controllable

High Quality, Stable Reception Tuner
- 40-Station AM/FM Random Access Preset Tuning
- Auto Preset Tuning

For details please contact:

YAMAHA

CREATING ‘KANDO’ TOGETHER

YAMAHA CORPORATION
P.O. Box 1, Hamamatsu, Japan

Visit us at our website: http://www.yamaha.co.jp/

APB603R-RXV1300@709